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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,855	10/16/2003	Sam Jang	RJ101303	8455

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EXAMINER	
PAPE, ZACHARY	
ART UNIT	**PAPER NUMBER**
2835	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 10/685,855	**Applicant(s)** JANG, SAM	
	Examiner Zachary M. Pape	**Art Unit** 2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _24 March 2005_.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _2-6,8-16,18-20 and 22-28_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) _18,20 and 26_ is/are allowed.

6)☒ Claim(s) _2-6,8-16,19,22-25,27 and 28_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _24 March 2005_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

U.S. Patent and Trademark Office
PTOL-326 (Rev. 1-04) **Office Action Summary** Part of Paper No./Mail Date 05112005

DETAILED ACTION

Response to Amendment

The following office action is in response to the reply filed on 3/24/2005 by the applicant.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2-12, 14-16, 19-25, 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cha (US 5,745,348) in view of Wenk (US 4,128,918). With respect to claim 27, Cha teaches the use of a split ring (22) adapted to encircle and clap around a cathode ray tube neck (4a; Column 2, Lines 55 – 60), connecting means at each end of said split ring (25, 26) said connecting means being adapted to removably lock said split ring around and clamp on said cathode ray tube neck (4a; as displayed in Fig 4), and a plurality of stand-offs (28, 29) extending from the split ring (22), each of the stand-offs having an end remote end spaced away from said split-ring, said remote stand-off end comprising a means (29b, Column 3, Lines 12 – 16) for removably receiving and securing said printed circuit board (1) spaced apart from and on said clamp (22; Column 3, Lines 12 – 22). Cha fails to teach that the connecting means can adjustably lock the split ring around the cathode ray tube.

Wenk teaches the use of a split ring (10) comprising a set of connecting means (20, 32) at each end of said split ring, the connecting means being adapted to adjustably and removably lock said split ring around a round object (38, as illustrated in Fig 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the split ring connecting means on Wenk with the printed circuit board coupling device of Cha to create a superior clamp capable of selectively fitting to a multitude of diameter sizes. (Wenk: Column 2, Lines 62-64). The ability of a clamp as taught by the applicant to fit a multitude of diameter sizes allows for a greater degree of flexibility by allowing the clamp to fit multiple types of CRT's.

With respect to claim 28, Cha further teaches the use of wings (27) spaced apart on the split-ring (22) and connect the stand-offs (28,29) to the split ring (22).

With respect to claims 2 and 3, Wenk teaches the use of a plurality of first teeth (26) on one end of the split ring (16) and a plurality of second teeth (36) each on another end of the split ring (14) for receiving the plurality of first teeth (26).

With respect to claim 4, Wenk further discloses that the first series of teeth (26) comprise barbs (26a) projecting radially from the split ring.

With respect to claim 5, Wenk further discloses that the connecting means (26) when arranged in a locked position is restrained by another of the connecting means (36, Wenk: Column 7, Lines 5 – 7).

With respect to claim 6, Wenk further discloses that the connecting means overlap one another when in the locked position (As illustrated in Fig 1).

With respect to claim 8, Cha illustrates in Fig 3 that the wings (27) have a thicker cross section in a direction perpendicular to the neck (4a).

With respect to claim 9, Cha illustrates in Fig 3 that the wing (27) connects a stand-off (28, 29) on each side of the split ring (22).

With respect to claim 10, Cha illustrates in Fig 3 that the inside of the split ring (22) is smooth and flat.

With respect to claim 11, Cha illustrates in Fig 3 that the circumferential surface of the split ring is wider than the split ring is thick.

With respect to claim 12, Cha illustrates in Fig 3 that the stand-offs are parallel to one another (Column 4, Lines 30 – 31).

With respect to claim 14, Cha illustrates in Fig 3 that the stand-offs (28, 29) are substantially rectangular and solid.

With respect to claim 15, Cha further discloses a barbed connector adapted for removably securing a component on said connector (generally wedged shaped connector at end of 28 as illustrated in Fig 3).

With respect to claim 16, Cha further discloses that the barbed connector is adapted to bear against one surface of the circuit board (1; Column 3, Lines 19-21).

With respect to claims 19 and 20, Cha discloses the claimed invention but fails to disclose one-piece construction. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create the coupling as one piece, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. Howard v. Detroit Stove Works, 150 U.S. 164 (1893).

With respect to claim 22, Cha further discloses that a connecting leg means (27) connects the stand-offs to the split ring (22; as illustrated in Fig 3).

With respect to claim 23, Cha illustrates in Fig 3 that the stand-offs (29) comprise a plurality of stand-offs (29b) each associated with connecting the printed circuit board (1) to the stand-off means.

With respect to claim 24, Cha illustrates in Fig 3 that each stand-off (28, 29) has an end remote from the split ring (22), the remote stand-off end comprising a seat (29a, and the sloped portion of 28), for removably receiving and securing the printed circuit board (1) on the clamp.

With respect to claim 25, Cha illustrates (In Fig 3) a gap opening (23) in the split ring. Such a gap would allow the split ring to bend if necessary when the split ring is secured around the cathode ray tube.

Claim 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Cha in view of Crowley (Patent # 5,963,432). With respect to claim 13, Cha teaches all the limitations as applied above to claim 1, but fails to teach the use of substantially cylindrical and hollow stand-offs.

Crowley teaches the use of a substantially cylindrical and hollow stand-off (as defined by the 4 quarters of the stand-off, 251, 252, 253, 254) for attaching printed circuit boards. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the substantially hollow and cylindrical stand-off of

Crowley with the coupling device of Cha to create a connection means which does not require a circuit board to be rotated or slid onto the stand-off, rather the board is quickly press fit onto the stand-offs.

Allowable Subject Matter

2. Claims 18, 20, and 26 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: Claim 1 from the applicants original correspondence dated 10/16/2003 has been combined with claim 17 which examiner held to be allowable in the previous office action dated 12/21/2004. Therefore the limitations in claim 26 are believed to render said claim 26 and all dependents therefrom patentable over the art of record.

Response to Arguments

3. Applicant's arguments filed 3/24/2005 have been fully considered but they are not persuasive.

In response to applicant's argument that Wenk is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Wenk clearly teaches the use of an adjustable snap on clamp for use with a circular object such as a hose, and while the examiner agrees with the applicant that the Wenk references has "no hint of using such a clamp to secure a printed circuit board to a cathode ray tube", it should be noted that the examiner is merely modifying the coupling device of Cha (Particularly elements 24-26) with a more versatile clamping means as taught by Wenk. Therefore it is within the means of one of ordinary skill in the art to recognize that the clamping means of Cha are insufficient in such a manner that it could be modified by the clamp of Wenk to produce the result as disclosed by the applicant.

Additionally Wenk clearly meets the new claim language, "said connecting means being adapted to adjustably and removably lock.." as disclosed in claim 27. As disclosed in Wenk Column 1, Lines 17-20, the teeth of the clamp interlock with mating teeth on an opposite side. The plurality of teeth not only provides the means of adjustability, but also provides the locking means as required by claim 27. The examiner further cites Wenk, Column 3, Lines 7-18.

In response to applicant's argument that Crowley is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, while the examiner agrees that the Crowley reference "has nothing to do with mounting a CRT to a printed circuit board", the examiner believes that the applicants "substantially cylindrical and hollow" stand-offs are clearly an obvious modification of existing art as taught by Cha in view of Crowley. As admitted by the applicant, the stand-offs of Crowley clearly are intended to affix to a circuit board as intended by the applicant. And while the Crowley reference fails to teach the use of a CRT with the standoff, the examiner is merely modifying the CRT coupling device of Cha to include the cylindrical standoffs of Crowley. Therefore it is within the means of one of ordinary skill in the art to recognize that the standoffs of Cha are insufficient in such a manner that it could be modified by the standoffs of Crowley to produce the result as disclosed by the applicant.

In response to applicant's argument that the leg ends of the split ring of applicants invention are flexible, Cha further teaches in Column 3, Line 40 that the standoffs (28) are elastic. The examiner further notes the definition of elastic as given in The American Heritage College dictionary 4th edition, "Easily resuming original shape after being stretched or expanded; flexible". Therefore the examiner believes that the standoffs as taught by Cha allow flexible snap engagement with the printed circuit board.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary M. Pape whose telephone number is 571-272-2201. The examiner can normally be reached on Mon. - Thur. & every other Fri. (8:00am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached at 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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